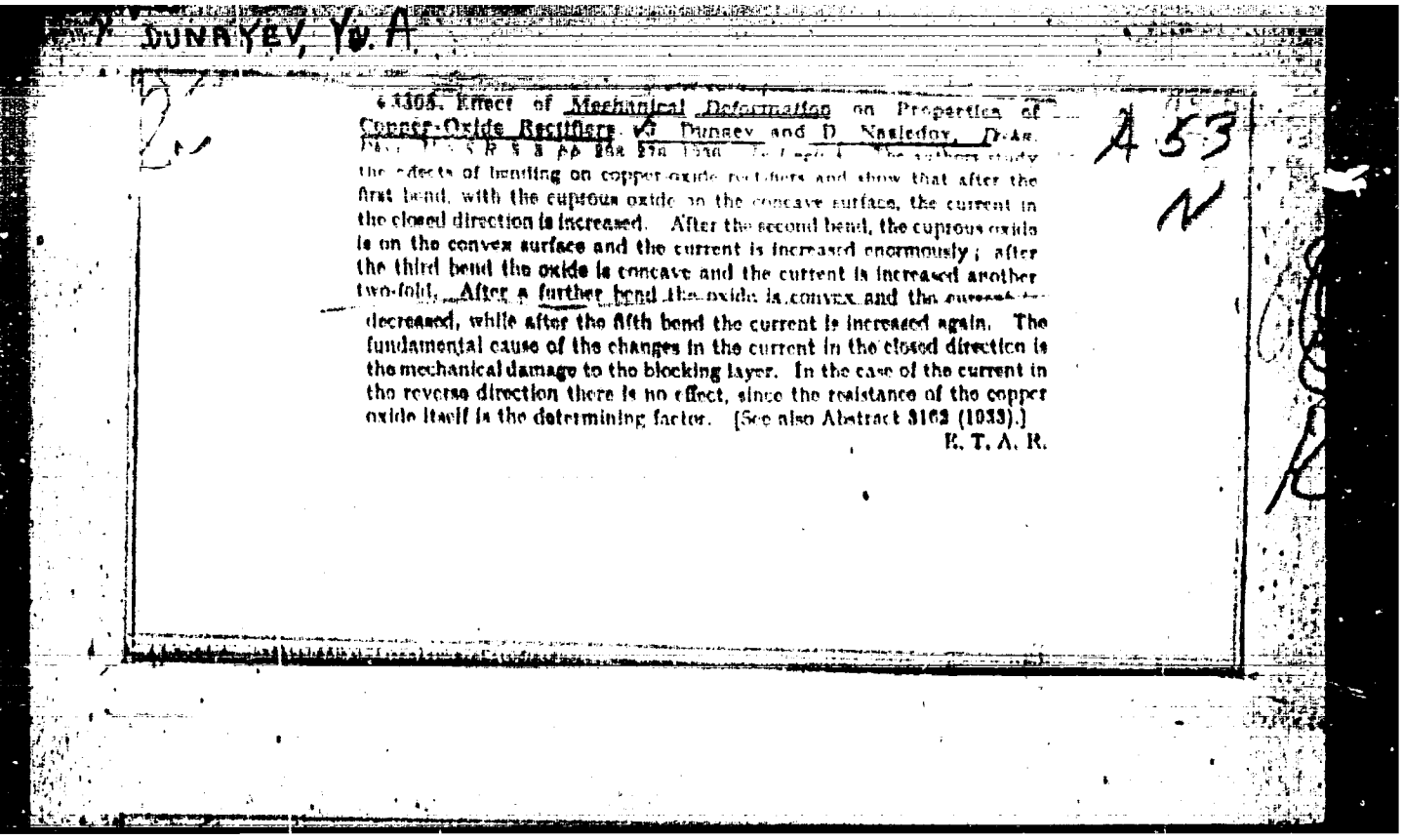


DUNAYEV, Yu. A.

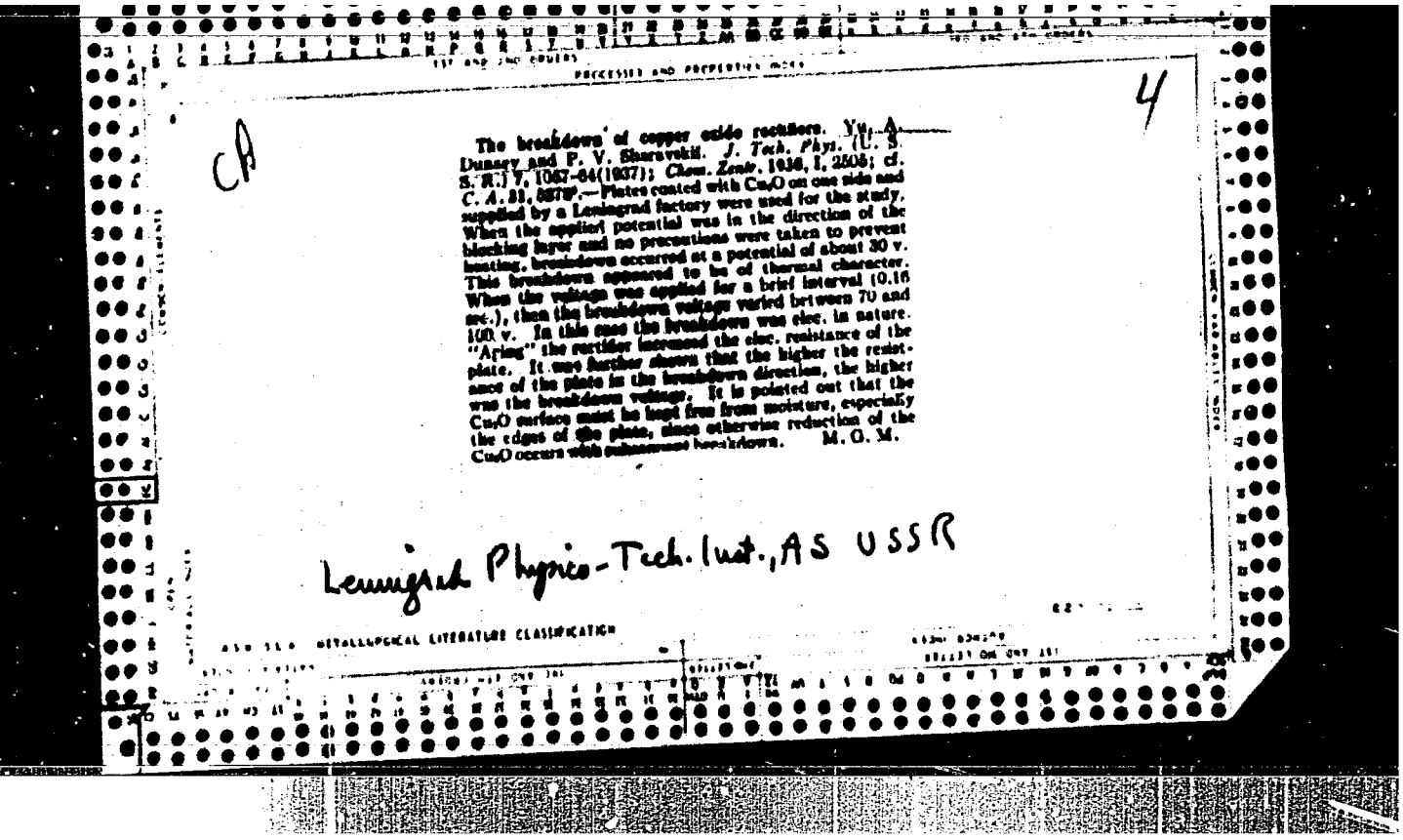
4305. Effect of Mechanical Deformation on Properties of Copper-Oxide Rectifiers. Yu Dunaev and D Nasledov. [illegible]

the effects of bending on copper-oxide rectifiers and show that after the first bend, with the cuprous oxide on the concave surface, the current in the closed direction is increased. After the second bend, the cuprous oxide is on the convex surface and the current is increased enormously; after the third bend the oxide is concave and the current is increased another two-fold. After a further bend the oxide is convex and the current is decreased, while after the fifth bend the current is increased again. The fundamental cause of the changes in the current in the closed direction is the mechanical damage to the blocking layer. In the case of the current in the reverse direction there is no effect, since the resistance of the copper oxide itself is the determining factor. [See also Abstract 3162 (1933).]

E. T. A. R.

453

N



CA

4

The breakdown of copper oxide rectifiers. Yu. A. Dunaev and P. V. Sharevskii. *J. Tech. Phys.* (U. S. S. R.) 7, 1067-64(1937); *Chem. Zentr.* 1938, I, 2508; cf. *C. A.* 31, 8879.—Plates coated with Cu_2O on one side and supplied by a Leningrad factory were used for the study. When the applied potential was in the direction of the blocking layer and no precautions were taken to prevent heating, breakdown occurred at a potential of about 30 v. This breakdown appeared to be of thermal character. When the voltage was applied for a brief interval (0.16 sec.), then the breakdown voltage varied between 70 and 100 v. In this case the breakdown was elec. in nature. "Aging" the rectifier increased the elec. resistance of the plate. It was further shown that the higher the resistance of the plate in the breakdown direction, the higher was the breakdown voltage. It is pointed out that the Cu_2O surface must be kept free from moisture, especially the edges of the plate, since otherwise reduction of the Cu_2O occurs with subsequent breakdown. M. O. M.

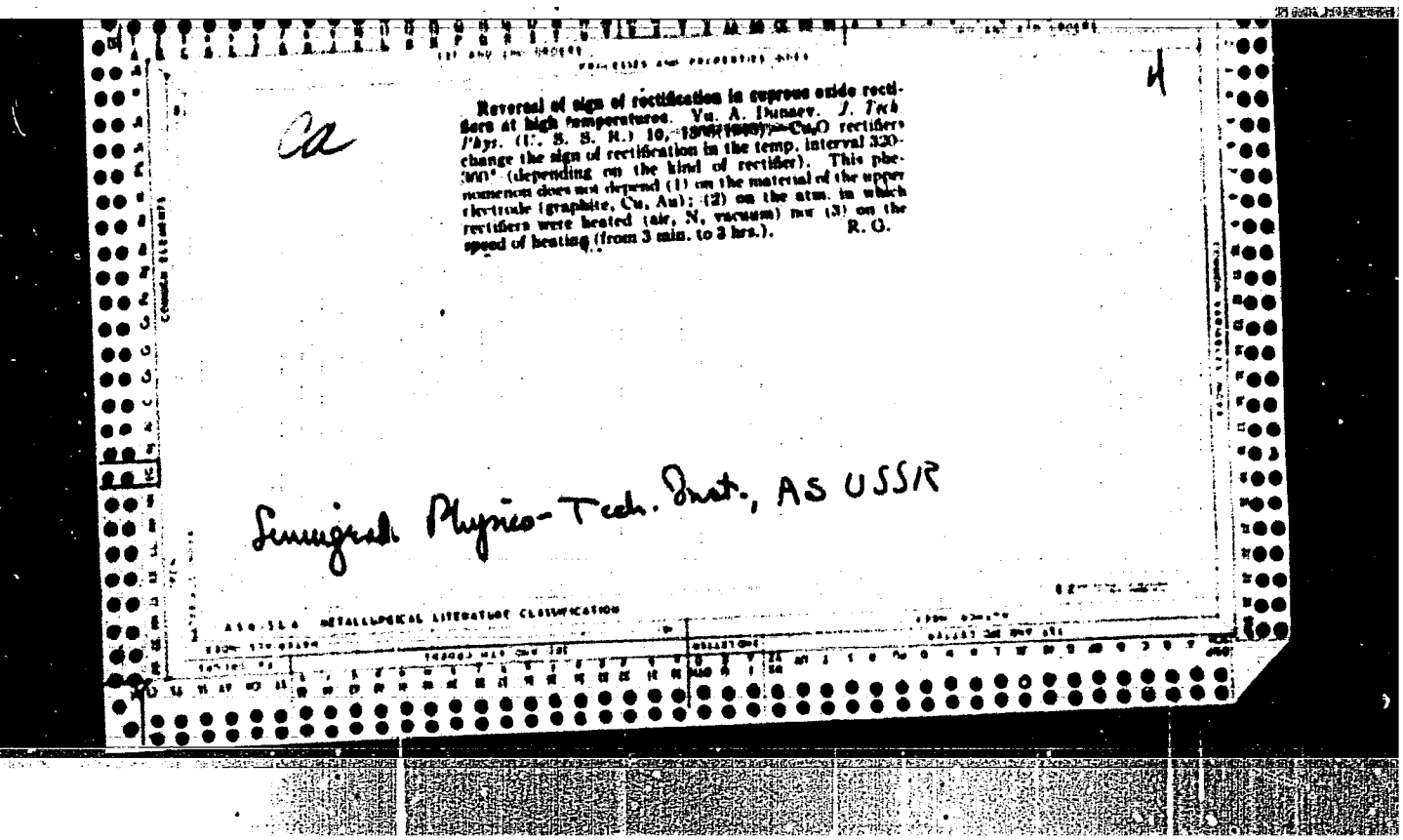
Leningrad Physico-Tech. Inst., AS USSR

METALLURGICAL LITERATURE CLASSIFICATION

Cuprous oxide plates for high-power cuprous oxide rectifiers. A. Z. Levinson and Yu. A. [illegible]. *J. Tech. Phys.* (U. S. S. R.) 8, 1212 [illegible]. The manuf. of large Cu_2O-coated Cu plates of approx. 1 sq. m. area is described. The washed Cu plates are kept at [illegible] (1030°) for 12 [illegible] min., then at [illegible] for [illegible] min. and then quenched in cold H_2O. The CuO formed is removed by 20% HNO_3 and brush. The breakdown potential of the cell is 75 v. The edges of the plates are lacquered, and the plates are coated with graphite and shellac in alc. soln. After 24 hrs.' drying at 60°, Zn is sprayed on. Several plates spaced 1.5 cm. from each other form a rectifier; no radiator plates for carrying away the heat are necessary.

J. J. Bikerman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Reversal of sign of rectification in cuprous oxide rectifiers at high temperatures. Yu. A. Dunaev. *J. Tech. Phys.* (U. S. S. R.) 10, 1[illegible]—Cu_2O rectifiers change the sign of rectification in the temp. interval 320-[illegible]° (depending on the kind of rectifier). This phenomenon does not depend (1) on the material of the upper electrode (graphite, Cu, Au); (2) on the atm. in which rectifiers were heated (air, N, vacuum) nor (3) on the speed of heating (from 3 min. to 3 hrs.). R. O.

Leningrad Physico-Tech. Inst., AS USSR

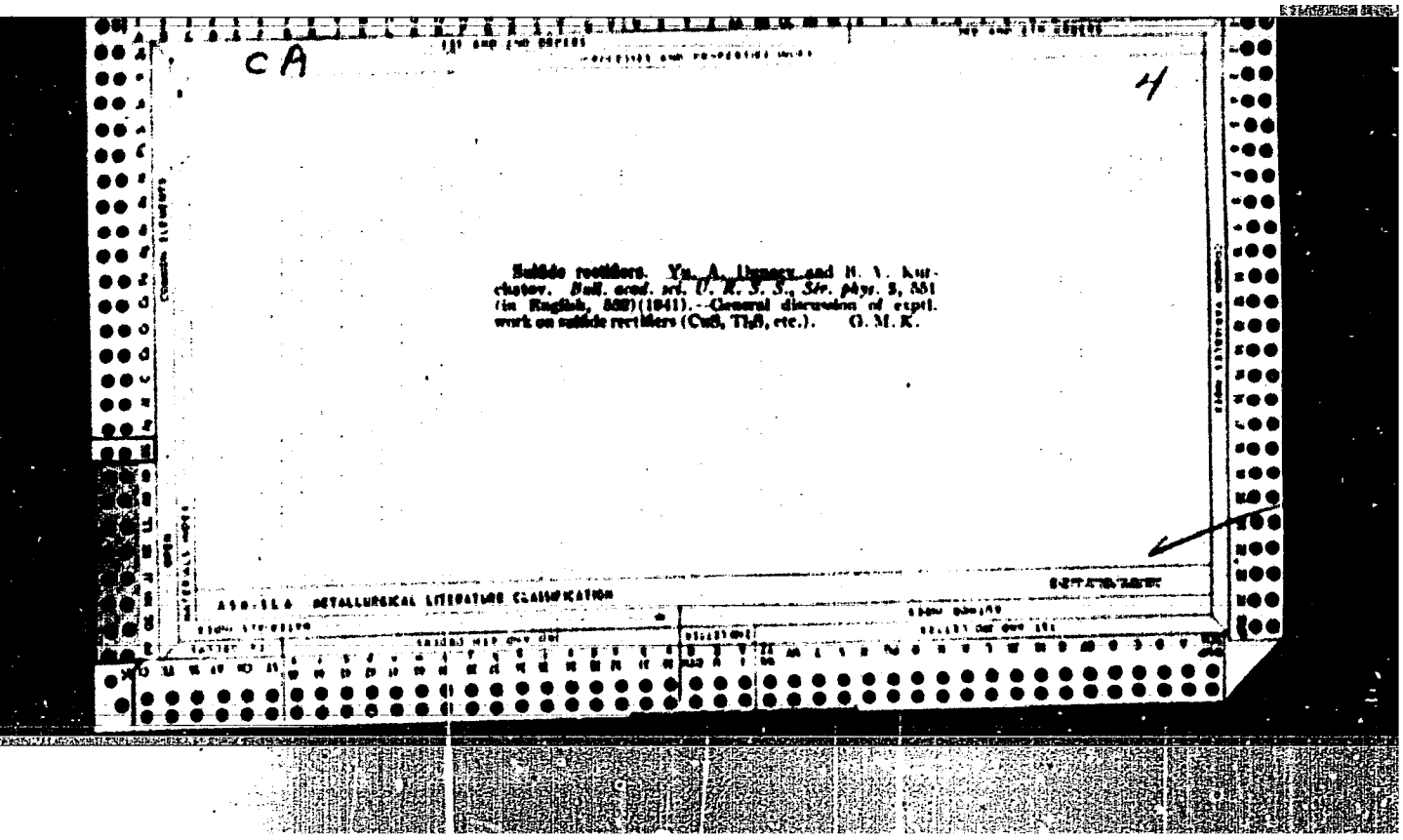
PROCESSES AND PROPERTIES INDEX

Ca

4

Sulfide rectifiers. Yu. A. Dunaev and B. V. Kurchatov. *J. Tech. Phys.* (U. S. S. R.) 10, 1857-70 (1940). The most favorable working temp. is between 100 and 120°. These rectifiers have capacities of 0.08 to 0.8 microfarad. All phenomena observed in sulfide rectifiers agree with the theory of the electronic rectifying mechanism proposed by Davydov (*C. A.* 33, 6700) and Schottky (*C. A.* 34, 32). R. Gamow

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION


CA

4

Sulfide rectifiers. Ya. A. Ugai and N. V. Kurchatov. *Bull. acad. sci. U. R. S. S., Sér. phys.* 5, 551 (in English, 557)(1941).—General discussion of exptl. work on sulfide rectifiers (CuS, ThS, etc.). G. M. K.

A50-SLA METALLURGICAL LITERATURE CLASSIFICATION

USSR/Physics Dec 1946

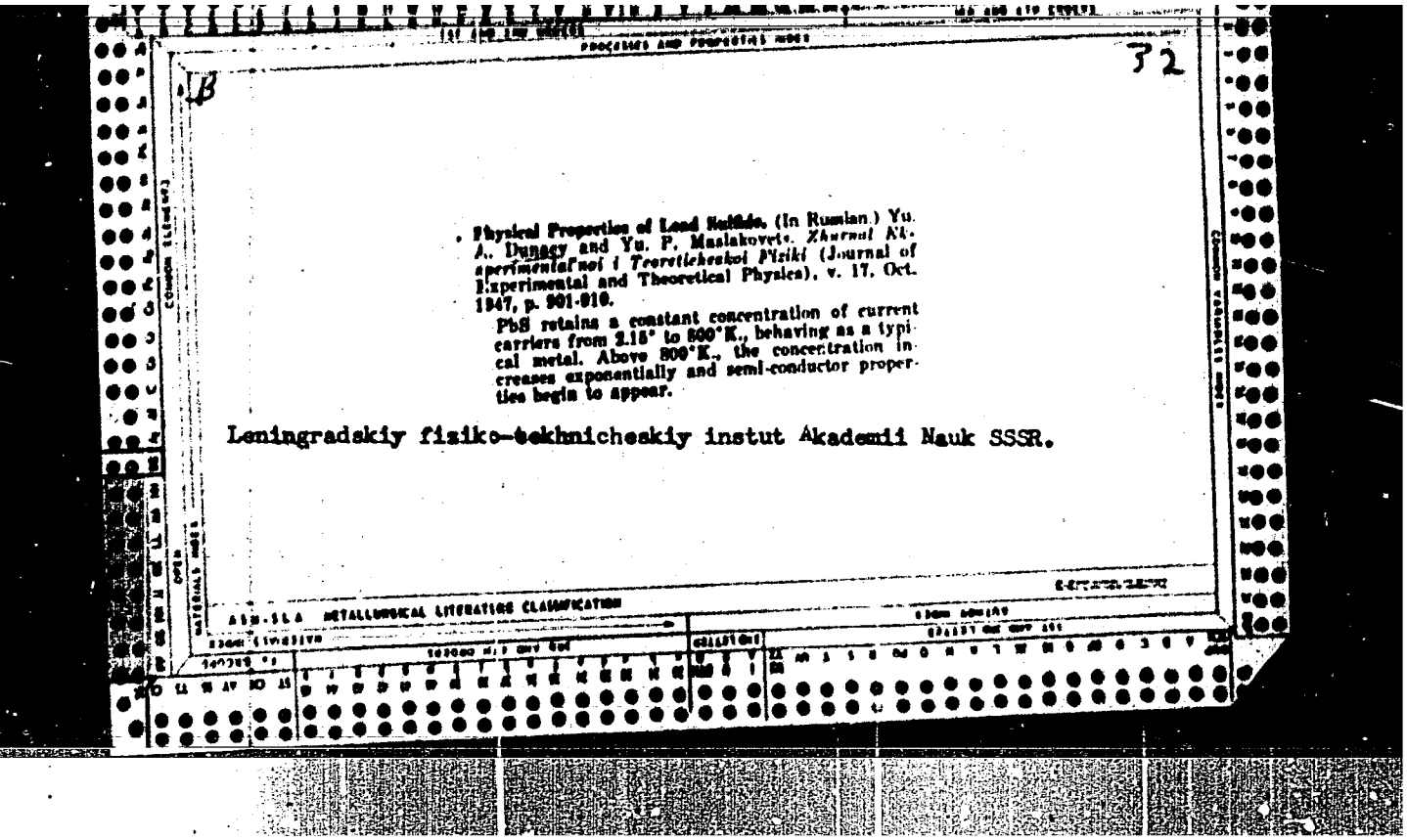
Conductivity, Thermal
Lead Sulfide

"Measurements of the Thermal Conductivity of Lead Sulphide," Yu. A. Dunayev, 4 pp

"Zhur Tekh Fiz" Vol XVI, No 10, pp 1101-4.

The author presents mathematical formulae for three methods of measuring the thermal conductivity of lead sulphide. All lead samples had a good, large crystalline structure. Yu. P. Maslakovets aided in the experiments and the work was submitted at the\\Leningrad Physico-Technical Institute, Academy of Sciences of the USSR.//

ID 26T93



72

Physical Properties of Lead Sulfide. (In Russian.) Yu. A. Dunaev and Yu. P. Maslakovets. *Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki* (Journal of Experimental and Theoretical Physics), v. 17, Oct. 1947, p. 901-910.

PbS retains a constant concentration of current carriers from 2.15° to 800°K., behaving as a typical metal. Above 800°K., the concentration increases exponentially and semi-conductor properties begin to appear.

Leningradskiy fiziko-tekhnicheskiy instut Akademii Nauk SSSR.

DUNAYEV, Yu. A. PA 58T25

USSR/Electricity Jan 1947
Conductivity
Lead Sulfide

"Measurements of the Resistance of PbS at Roughly Absolute Zero Temperature," Yu. A. Dunayev, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LV, No 1, pp 21-23.

Describes experiments which led to conclusion that PbS is not a semiconductor in classic sense, that perforated and electronic PbS behave similarly at low temperatures, and that superconductivity is not evident in PbS. Submitted by Academician A. F. Ioffe, 7 Aug 1946.

58T25

ZERNYAKOV, Boris Stepanovich; TREBELEV, Aron Markovich; BURLAKOV, Vladimir Yevgen'yevich; POLIVANOV, Vasiliy Fedorovich; MANZON, Eduard Abramovich; ZUNAYEV, Yuriy Andreyevich; UDAL'TSOV, A.N., glavnyy red.; MALOV, A.N., kand.tekhn.nauk, red.; TUCHINSKIY, N.V., insh., red.; ZASLAVSKIY, M.L., insh., red.; SMIRNOV, P.V., insh., red.; NEUSYPIN, A.M., insh., red.

[New method of preparing aluminum alloys in electric furnaces; Efforts to avoid losses in brass smelting; Use of rolled metal with variable cross section for the manufacture of truck trailer axles; New design of rotor blades for low capacity hydraulic turbines; Lubricant collection in settling basins] Novyi sposob prigotovleniia aliuminievykh splavov v elektricheskikh pechakh; Bor'ba s poteriami pri plavke latuni; Primenenie prokata peremennogo secheniia dlia izgotovleniia osei avtopritsepa; Novaia konstruktsiia lopastei rabochikh koles gidroturbin maloi moshchnosti; Sbor masla v otstoinikakh. Moskva, 1956. 12 p. (Peredovoi proizvodstvenno-tekhnicheskii opyt. Ser.19. Ekonomiia materialov i novye materialy, primeniaemye v mashinostroenii. No.T-56-363/6). (MIRA 13:3)

1. Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii.

(Technological innovations)

YUZHPOVICH, A.A.; MIRSHANOV, D.N.; DUMAYEV, Yu.A.

Flat colored gas layer for visualising the aerodynamic spectra of a flow past axially symmetrical bodies. Dokl.AN SSSR 108 no.1: 73-74 My '56. (MLRA 9:8)

1. Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR. Predstavleno akademikom L.A. Artsimovichem.
(Ballistics) (Aerodynamics) (Gas flow)

SOV/179-59-2-33/40

AUTHORS: Dunayev, Yu. A., Mishin, G. I. (Leningrad)

TITLE: A Ballistic Tube for Determination of the Drag Coefficient in a Free Flight (Ballisticheskaya truba dlya izmereniya koeffitsiyentov soprotivleniya tel v svobodnom polete)

PERIODICAL: Izvestiya Akademii nauk SSSR OTN, Mekhanika i mashinostroyeniye, 1959, Nr 2, pp 188-190 (USSR)

ABSTRACT: The author describes a ballistic tube for the investigation of flying bodies. It provides the possibility of determination of the drag coefficient with simultaneous photographing of the spectra of the gas flow around the body. The apparatus is illustrated in Figs 1 and 2: the high initial velocity of a flying body is obtained by shooting it from a rifle 1 (calibre 14.5 mm). The retardation of the sound waves of the firing is obtained in the vacuum container 2 (1 mm pressure) which is controlled by the pump 3 and the manometer 4. The flying body has a spherical shape of 9.46 mm dia. Both ends, i.e. inlet and outlet, of the container are covered with a cellophane sheet 0.04 mm thick. The ballistic tube 5, 4 m long and 300 mm dia, is divided into four sections. Three sections have two windows each, size 720 x 100 mm, placed opposite each other and two flanges of 150 mm dia. The latter

Card 1/4 are included in the apparatus for fixing pumps, manometers,

A Ballistic Tube for Determination of the Drag Coefficient in a Free Flight

vacuum-meters and for the supply of gas. The sector 6 and the vacuum container 7 serve as air excluders from the surface of the flying body. The pressure is measured with the vacuum-meter 9 . The gas is contained in the bottle 10 and its pressure and temperature are measured with the manometer 11 and the thermometer 12. Prior to the experiments, the pressure in the tube is brought to 10^{-2} mm. The trigger is released by the electric current controlled by the relay 26 and the panel 24 . The photographs are taken through the windows 13 with the camera 14 (the exposure of 0.5 x 10^{-6} sec was obtained with the camera "KIYEV"). The lighting system 15 to 18 is obtained from a series of impulses producing flashes in the arrangement 21-23 . The flash circuit is shown in Fig 3, where ℓ - signal from the photocell 23 , v - trigger, g - generator, c - cascade, e - frequency divider, h - univibrator). The drag coefficient of the

Card 2/4

A Ballistic Tube for Determination of the Drag Coefficient in a Free Flight

flying body is determined by the expression

$$C_x = \frac{8ma}{\rho u^2 \pi d^2}$$

where m - mass of the sphere, a - delay, ρ - density of gas, u - velocity of the sphere, d - diameter of the sphere. Time is not considered in this expression due to $u \sim t^{-1}$, and $a \sim t^{-2}$. Knowing the gas pressure p and its temperature T in the tube, the density can be calculated from the formula $\rho = 0.3594 \rho_0 \frac{P}{T}$, where ρ_0 - density of gas at the temperature $0^\circ C$ and pressure 760 mm. The results of the measurements of C_x in the air at the atmospheric pressure are shown in Fig 4. The flying sphere in this case had the following parameters: M - 2.4 - 6.1,

SOV/179-59-2-33/40

A Ballistic Tube for Determination of the Drag Coefficient in a Free Flight

R - 5.0×10^5 to 1.0×10^6 . Thanks are given to A. A. Sokolov for his help in the experiment. There are 4 figures and 4 English references.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Physical Technical Institute of Academy of Sciences USSR)

SUBMITTED: November 5, 1958.

Card 4/4

10.1410

24.4300

27175

S/057/61/031/009/015/019
B104/B102

AUTHORS: Dunayev, Yu. A., Tumakayev, G. K., and Shukhtin, A. M.

TITLE: Interference method by Rozhdestvenskiy for studying gasdynamic processes in shock tubes

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 9, 1961, 1119-1126

TEXT: The authors describe an experimental arrangement for studying gasdynamic processes by an interference method suggested by D. S. Rozhdestvenskiy (Raboty po anomal'noy dispersii v parakh metallov (Papers on anomalous dispersion in metal vapors), Izd. AN SSSR, 1951). They give preliminary data on the concentration of normal and excited Hg atoms, the temperature of the gas flow behind a shock wave, and on values of the number f for some Hg lines. Figs. 1 and 2 show the experimental arrangement. The low-pressure chamber was made of copper and had a cross section of 38 by 76 mm; the distance between the diaphragm separating the low-pressure from the high-pressure section of the chamber, and the window was 1250 mm. The shock wave was generated by fracture of the diaphragm caused by the nitrogen or helium pressure of 5-30 atm produced in the high-pressure

Card 1/6

Interference method by ...

chamber. Differently thick diaphragms were used. The spectral apparatus used consisted of a spectroscope with a plane diffraction grating and a concave mirror with a focal length of 175 cm. The authors studied interference patterns of mercury vapors the shock wave in the spectral range of 2500-5800 Å for Mach numbers of 6-11.5. The concentration of excited atoms increased with rising M; this increased the dispersion around the lines of the secondary series. The number of lines, near which hook-shaped dispersion patterns appeared, also increased. Dispersion was observed for M~6.5 near nine lines of the secondary series, for M~8 near 14 lines of the secondary series, and for M~9.5 near 18 lines of the secondary series. For M~11.5 a hook-shaped pattern was observed only near the lines of the visible triplet. At this value of M the shock wave propagated with 2000 m/sec. Table 1 gives the numbers N_k of atoms excited for M = 6.4-11.7 as determined from the dispersion patterns near the visible Hg triplet (4047 Å, 4358 Å, 5461 Å). Table 2 gives temperatures of Hg vapor for three Mach numbers. The data obtained permit some statements on the transition probabilities, or the numbers f:

Card 2/8

27175
S/057/61/031/009/015/019
B104/B102

Interference method by ...

$$f_{4358} : f_{4079} : f_{3130} : f_{3130} : f_{3984} = 100 : 4 : 159 : 87 : 18,$$
$$f_{5461} : f_{5063} : f_{4358} : f_{3650} : f_{3341} : f_{3021} = 100 : 16 : 29 : 209 : 14 : 75.$$

The results prove the suitability of Rozhdestwenskiy's method for determining the transition probabilities of atoms. The authors thank S. E. Frish, Corresponding Member AS USSR, for attention and interest, as well as N. V. Sosulin, Laboratory Assistant, for his help. There are 5 figures, 2 tables, and 10 references: 7 Soviet and 3 non-Soviet. The two references to English-language publications read as follows: E. Russel, The Physics of Fluids, 2, no. 2, 207, 1959; E. Brannen et al., Nature, 175, no. 4462, 7, 810, 1955.

ASSOCIATION: Fizicheskiy institut Leningradskogo universiteta (Physics Institute of Leningrad University)
Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR Lenihgrad (Physicotechnical Institute imeni A. F. Ioffe of the AS USSR, Leningrad)

Card 3/8

DONSKOY, K.V.; DUNAYEV, Yu.A.; PROKOF'YEV, A.I.

Electric conductivity measurements in gas jets. Zhur. tekh. fiz. 32 no.9:1095-1098 S '62. (MIRA 15:9)

1. Fiziko-tekhnicheskiy institut imeni A.F. Ioffe AN SSSR, Leningrad.
(Electric conductivity—Measurement)
(Jets—Fluid dynamics)

AUTHOR: Dunayev, Yu.A.; Yavor, I.P.; Busygin, E.P.

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: On the low voltage cesium vapor arc

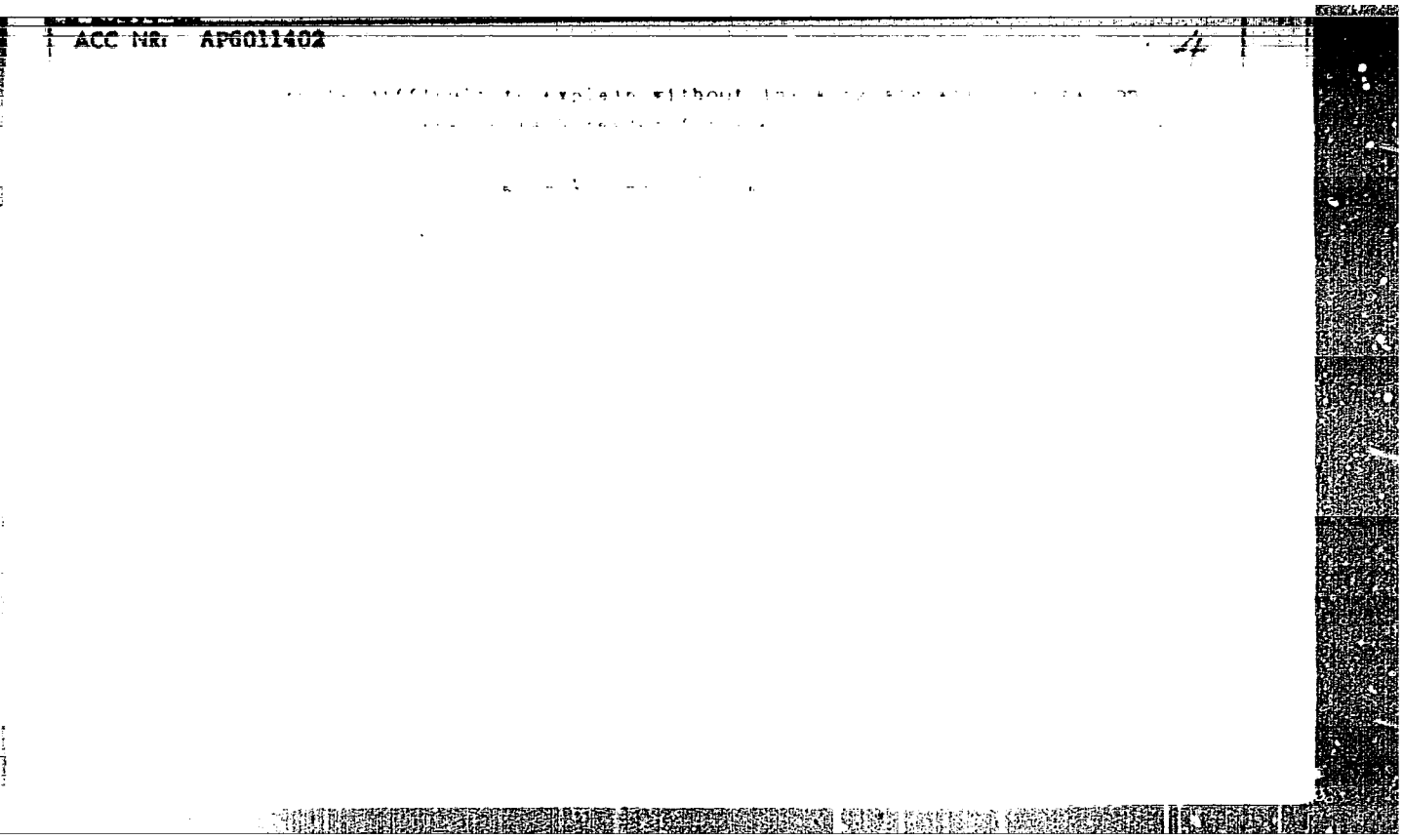
SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 3, 1966, 533-541

TOPIC TAGS: electric arc, cesium, electron temperature, electron density, cesium plasma, direct energy conversion, IR spectrum, electron temperature, spectral line

ABSTRACT: The authors have investigated the visible and near infrared spectra of low voltage hot cathode cesium vapor arcs. The investigation was undertaken because of the technical importance of cesium arcs for the development of energy converters and the presence in the literature of discordant data, particularly concerning electron temperatures. The electrodes were of molybdenum, the 1 x 1 mm² working faces were plane and parallel. The cathode was of foil and was heated by direct current. The arc parameters were varied over the following ranges: electrode spacing, 0.5-2 mm; cathode temperature, 1400-1800° K; cesium vapor pressure, 0.5-5 mm Hg; current density, 2-20 A/cm². The dispersion of the type DFS-12 spectrometer was 5 A/mm in the second order (4000-6000A) and 10 A/mm in the first order (6000-12 000 A). The FEU-36 photomultiplier employed to record the spectra was sensitive from 3000 to approximately 9000 A. The

Card 1/3

arc was imaged at unit magnification on the spectrometer slit, which was parallel to the plane of the electrodes; conditions in the arc could thus be observed between the electrodes at different distances from them. Many cesium lines were observed in the spectrum. Electron temperatures were determined from line intensities in the sharp and diffuse series, the intensities were consistent with Boltzmann distribution of the level populations. The electron temperatures ranged from 1200 to 3000 or 4000° K. Electron concentrations were derived from the Stark broadening of lines of the fundamental series, electron concentrations of the order of 10^{17} or 10^{15} cm^{-3} were observed. A number of forbidden lines were recorded. Electron concentrations derived from the forbidden line intensities as suggested by L.I.Grechikhin and Ye.S.Tyumina (TVT, 1, 395, 1963) were considerably lower than those derived from the Stark broadening. In low current arcs the electron temperature increased almost linearly with distance from the cathode throughout the whole electrode gap. In higher current arcs the electron temperature at first increased more rapidly with distance from the cathode [illegible] arcs, but this increase did not persist [illegible] the full gap [illegible] temperature was nearly constant throughout most of the arc. The [illegible] were most intense in a region of the arc somewhat [illegible] the cathode [illegible] The electron density was maximum at [illegible] from the [illegible] position of the electron density maximum [illegible] anode [illegible] and at the highest [illegible] [illegible] sheet. The physical mechanisms [illegible] [illegible] not definite [illegible] [illegible] temperature and maximum [illegible]



DUNAYEV, Yu.D.; KIR'YAKOV, G.Z.

Potentials of lead-base cermet anodes in sulfuric acid solutions. Izv. AN Kazakh. SSR. Ser.khim. no.1:12-18 '58. (MIRA 12:2)
(Electromotive force) (Electrodes) (Sulfuric acid)

DUMATEV, T.D.; KIR'YAKOV, G.Z.

Lead-base powder-metal anodes. Trudy Inst. khim. nauk AN Kazakh. SSR 3:87-101 '58. (MIRA 12:3)
(Lead) (Electrodes)

KIR'YAKOV, O.Z.; RAZINA, N.F.; DUNAYEV, Yu.D.

Insoluble anodes based on lead. Trudy Inst.khim.nauk AN Kazakh. SSR 6:3-53 '60. (MIRA 14:4)

(Electrodes, Lead)

DUNAYEV, Yu.D.; KIR'YAKOV, O.Z.

Distribution of potential and current in the pores of an anode based on lead during its polarization in sulfuric acid solutions. Trudy Inst.khim.nauk AN Kazakh.SSR 6:67-85 '60. (MIRA 14:4)
(Electrodes, Lead) (Electrochemistry)

S/850/62/009/000/001/012
B117/B186

AUTHORS: Dunayev, Yu. D., Kir'yakov, O. Z., Chernysheva, Z. N.

TITLE: Inhomogeneity of the surface and electrode processes on porous lead anode

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk. Trudy. v. 9. Alma-Ata, 1962. Elektrokhimiya rastvorov i metallicheskikh sistem, 18-41

TEXT: The laws governing the distribution of processes whose sequence and rate depends on the change in potential along the pores were studied. As regards the reactions producing oxygen, lead dioxide, and lead sulfate, equations were derived for the distribution of potential and current in the pores according to their diameter, for the conductivity of electrolyte and for the current density. At high polarization, oxygen was shown to form also over a comparatively short pore section. In the potential region, this section, whose length remains practically constant at sufficiently long polarization time, is above +1.760 v. The velocity of the process can be expressed with sufficient accuracy by the Tafel equation.

The formation of lead dioxide, during which the potential is slightly shifted from its equilibrium value, takes place in a section at some distance from the pore opening, this section being bounded by the zone of lead sulfate formation and its length increasing with time. The sulfate formation begins in the region of potential change, in which the density of available current is commensurable with the exchange current for $Pb \rightleftarrows Pb^{++}$. The process $Pb \rightleftarrows PbSO_4$ was found to take place in a tube of finite length in the region of positive potentials (far away from φ = -0.299 v). This region is determined by the exponential distribution theorem for the current density along the tube. Experimental and theoretical data are in good agreement. A pore model (consisting of a tube with exchangeable units) was used for studying the effect of alloying additives on the current distribution and on the increase in anode stability: additives that redistribute the current on microsections under the protective layer and whose ions affect the structure and strength of the PbO_2 film as well as the kinetics and mechanism of oxygen formation (e.g. silver) are especially effective in metal-ceramic compounds; additives whose action depends on structural changes of the alloy (e.g. thallium) are most

effective in cast electrodes (solid solutions). The effect of metal ions which increase the stability of Pb sets in at a current density of more than 10^{-4} a/cm^2, i.e. in the potential region of the formation of highly oxidized compounds. The formation of the PbO_2 film is replaced partly by the formation and continuous regeneration of a phase layer of easily decomposing metal oxides. The overpotential of oxygen is reduced. There are 11 figures and 1 table.

Card 3/3

DUNAYEV, Yu.D.; KIR'YAKOV, G.Z.

Macromodelong of a pore as a method of studying porous electrochemical systems. Trudy Inst. khim. nauk AN Kazakh.SSR 12:137-156 '64. (MIRA 18:2)

DUNAYEVA, A. V.

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P.; BUCHINSKIY, I.Ye.; SEYANINOV, G.T., professor; BOSHKO, L.V.; ALISOV, B.P.; BIRYUKOV, N.N.; GAL'TSOV, A.P.; GRIGOR'YEV, A.A., akademik; EYGENSON, M.S., professor; MURATOV, N.S.; KHROMOV, S.P.; BOGDANOV, P.N.; LEBEDEV, A.N.; SOKOLOV, V.N.; YANISHEVSKIY, Yu.D.; SAMOYLENKO, V.S.; USMANOV, R.F.; CHUBUKOV, L.A.; TROTSENKO, S.Ya.; VANGENGEYM, G.Ya.; SOKOLOV, I.F.; STYRO, B.I.; TEMNIKOVA, N.S.; ISAYEV, E.A.; DMITRIYEV, A.A.; MALYUGIN, Ye.A.; LIIDEMAA, Ye.K.; SAPOZHNIKOVA, S.A.; RAKIPOVA, L.R.; POKROVSKAYA, T.V.; BAGDASARYAN, A.B.; ORLOVA, V.V.; RUBINSHTEYN, Ye.S., professor; MILEVSKIY, V.Yu.; SHCHERBAKOVA, Ye.Ya.; BOCHKOV, A.P.; ANAPOL'SKAYA, L.Ye.; DUNAYEVA, A.V.; UTESHEV, A.S.; RUDNEVA, A.V.; RUDENKO, A.I.; ZOLOTAREV, M.A.; MERSESYAN, A.G.; MIKHAYLOV, A.N.; GAVRILOV, V.A.; TSOMAYA, T.I.; DEVYATKOVA, A.M.; ZAVARINA, M.V.; SHOSTER, S.M.; BUDYKO, M.I., professor.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor.GUGMS no.3/4:26-154 '54. (MLRA 8:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Fedorov). 2. Glavnaya geofizicheskaya observatoriya im. A.I.Voeykova (for Predtechenskiy, Lebedev, Yanishevskiy, Isayev, Rakipova, Pokrovskaya, Orlova, Rubinshteyn, Budyko, Shcherbakova, Anapol'skaya, Dunayeva, Rudneva, Gavrilov, Zavarina). 3. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Buchinskiy).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform. sbor. GUGMS no.3/4:26-154 '54. (Card 2) (MIRA 8:3)

4. Vsesoyuznyy institut rastenievodstva (for Selyaninov, Rudenko). 5. Bioklimaticheskaya stantsiya Kislovodsk (for Boshno). 6. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova (for Alisov). 7. Ministerstvo putey soobshcheniya SSSR (for Bizyukov). 8. Institut geografii Akademii nauk SSSR (for Gal'tsov, Grigor'yev). 9. Geofizicheskaya komissiya Vsesoyuznogo geograficheskogo obshchestva (for Eygenson). 10. Ministerstvo elektrostantsiy i elektropromyshlennosti SSSR (for Muretov). 11. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova (for Khrenov). 12. TSentral'nyy nauchno-issledovatel'skiy gidrometeorologicheskiy arkhiv (for Sokolov, Zolotarev). 13. Gosudarstvennyy okeanograficheskiy institut (for Samoylenko). 14. TSentral'nyy institut prognozov (for Usmanov, Saposhnikova). 15. Institut geografii Akademii nauk SSSR i TSentral'nyy institut kurortologii (for Chubukov). 16. Nauchno-issledovatel'skiy institut imeni Sechenova, Yalta (for Trotsenko). 17. Arkticheskiy nauchno-issledovatel'skiy institut (for Vangengeym).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state of climatological research and methods of developing it]. Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 3) (MLRA 8:3)

18. Dal'nevostochnyy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Sokolov). 19. Institut geologii i geografii Akademii nauk Litovskoy SSR (for Styro). 20. Rostovskoe upravlenie gidrometsluzhby (for Temnikova). 21. Morskoy gidrofizicheskiy Institut Akademii nauk SSSR (for Dmitriyev). 22. Vsesoyuznyy institut rasteniyevodstva (for Malyugin). 23. Akademiya nauk Estonskoy SSR (for Liedemaa). 24. Akademiya nauk Armyanskoy SSR (for Bagdasaryan). 25. Leningradskiy gidrometeorologicheskiy institut (for Milevskiy).

(Continued on next card)

FEDOROV, Ye.Ye., professor; PREDTECHENSKIY, P.P., and others.

Discussion of the report (in the form of debates) [of the current state climatological research and methods of developing it]. Inform.sbor. GUGMS no.3/4:26-154 '54. (Card 4) (MLRA 8:3)

26. Gosudarstvennyy gidrologicheskiy institut (for Bochkov). 27. Kazakhskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (for Uteshev). 28. Upravlenie gidrometslushby Armyanskoy SSR (for Mersesyan). 29. Leningradskoye upravleniye gidrometslushby (for Mikhaylov, Devyatkova). 30. Tbilisskiy gosudarstvennyy universitet (for Tsomaya). 31. TSentral'naya aerologicheskaya observatoriya (for Shmeter).
(Climatology)

DUNAYEVA, A.V.

PHASE I BOOK EXPLOITATION SOV/4192
SOV/2-S-90

Leningrad. Glavnaya geofizicheskaya observatoriya

Voprosy sinopticheskoy klimatologii (Problems in Synoptic Climatology) Leningrad, Gidrometeoizdat, 1960. 154 p. (Series: Its: Trudy, vyp. 90) Errata slip inserted. 1,100 copies printed.

Additional Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (Title page): O. A. Drozdov, Doctor of Geography; Ed. (Inside book): V. S. Protopopov; Tech. Ed.: M. I. Braynina.

PURPOSE: The publication is intended for meteorologists and climatologists.

COVERAGE: This is a collection of 11 articles published as No. 90 of the Transactions of the Main Geophysical Observatory imeni A. I. Voyeykov

Card 1/4

and dealing with problems of synoptic climatology. Individual articles are concerned with the succession of synoptic processes as the basic for forecasting, atmospheric circulation over China, frequency of typhoons over China, and various processes of the eastern and western forms of atmospheric circulation. References accompany each article.

TABLE OF CONTENTS:

Afanas'yeva, V.B. Testing a Forecasting Method Based on the Succession of Synoptic Processes 3

Chzhan Tszya-chen. Long-Term Mean Characteristics of Some Meteorological Elements and of Circulation over China in Winter 11

Chzhan Tszi-tszya. Long-Term Mean Characteristics of Atmospheric Circulation and Weather Conditions over China in Summer 43

Problems in Synoptic Climatology SOV/4192

Chzhan Tszi-tszya. Long-Term Change in Some Meteorological Elements and the Frequency of Typhoon over China and Their Connection With the Epochal Transformations of W, C, E Forms 63

Dunayeva, A. V. Relation Between the Diurnal Anomalies of Air Temperature and the Variety of Processes of the Eastern Form of Circulation 79

Dunayeva, A. V. Relation Between the Diurnal Anomalies of Air Temperature and the Variety of Processes of the Western Form of Circulation 87

Vitel's, L. A. Long-Term Changes in the Frequency of Various Forms of Atmospheric Circulation and Their Transaformations in Connection With Solar Activity 95

Vitel's, L. A. Solar Calendar of Ultrapolar Processes 116

Shapayev, V. M. Trade-Wind Circulation Over the Atlantic Ocean 130

Card 3/4

Problems in Synoptic Climatology SOV/4192

Spitsyna, N. L. Application of Some General Laws of Cyclone Movement to Those Cyclones Which Cause the Danger of Flood on the Neva River

149

AVAILABLE: Library of Congress

Card 4/4

JA/cdw/ec
9-15-60

DUNAYEVA, A.V.

Relation between diurnal anomalies of the air temperature and various forms of processes associated with the eastern type of atmospheric circulation. Trudy GGO no.90:79-86 '60.
(MIRA 13:6)

(Atmospheric temperature)

DUNAYEVA, A.V.

Relation between diurnal anomalies of the air temperature and various forms of processes associated with the western type of atmospheric circulation. Trudy GGO no.90:87-94 '60.
(MIRA 13:6)

(Atmospheric temperature)

DUNAYEVA, A.V.; ZANINA, M.S.; TSYGANOVA, A.M.

Studying spatial variations in the characteristics of the snow cover. Trudy GG) no.108:19-25 '60. (MIRA 13:11)
(Snow surveys)

DUNAYEVA, A.V.; ZANINA, M.S.

Technique of calculating the predictability of the appearance of the snow cover. Trudy GGO no.113:51-56 '60. (MIRA 14:3)
(Snow)

DUNAYEVA, A.V.

Appropriate methods for processing data on snow surveys. Trudy GGO no.130:51-64 '62. (MIRA 15:7)
(Snow surveys)

DUNAYEVA, A.V.

Distribution of the snow cover on the territory controlled by the Northwestern Administration of the Hydro-meteorological Service. Trudy G O no. 112:107-115 '63. (MIRA 17:5)

DUNAYEVA, A.V.

Accuracy of measuring the height of the snow cover. Trudy GGO no.163:87-92 '64 (MIRA 18:1)

Sampling as the basis for the proper organization of stationary snow surveys. Ibid.:122-15[illegible]

DUNAYEVA, A.V.

Problem of studying the transparency of the atmosphere during snowfalls. Trudy GGO no.169:36-52 '65. (MIRA 18:8)

DUNAYEVA, A.V.

Distribution of the snow cover on homogeneous underlying surfaces. Trudy GGO no.175:200-207 '65. (MIRA 18:8)

1. Glavnaya geofizicheskaya observatoriya im. A.I.Voyeykova, Leningrad.

DUNAYEVA, E.M.; SIVUKHA, T.A.

Rheo-encephalographic, electroencephalographic, and clinical study on patients with cervical osteochondrosis with disorders of higher visual function. Zhur. nevr. i psikh. 65 no.9:1281-1285 '65. (MIRA 18:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut ekspertizy trudosposobnosti, Moskva.

NR. A[illegible]005239 SOURCE CODE: UR/[illegible]/000/000/E134/E135

AUTHORS: Dunayev, F. N.; Kalinin, V. M.; Maysinovich, V. I.

[illegible] ...ropy of longitudinal, transverse, and volume [illegible] effect

[illegible] magnitn. yavleniy. Sverdlovsk [illegible]

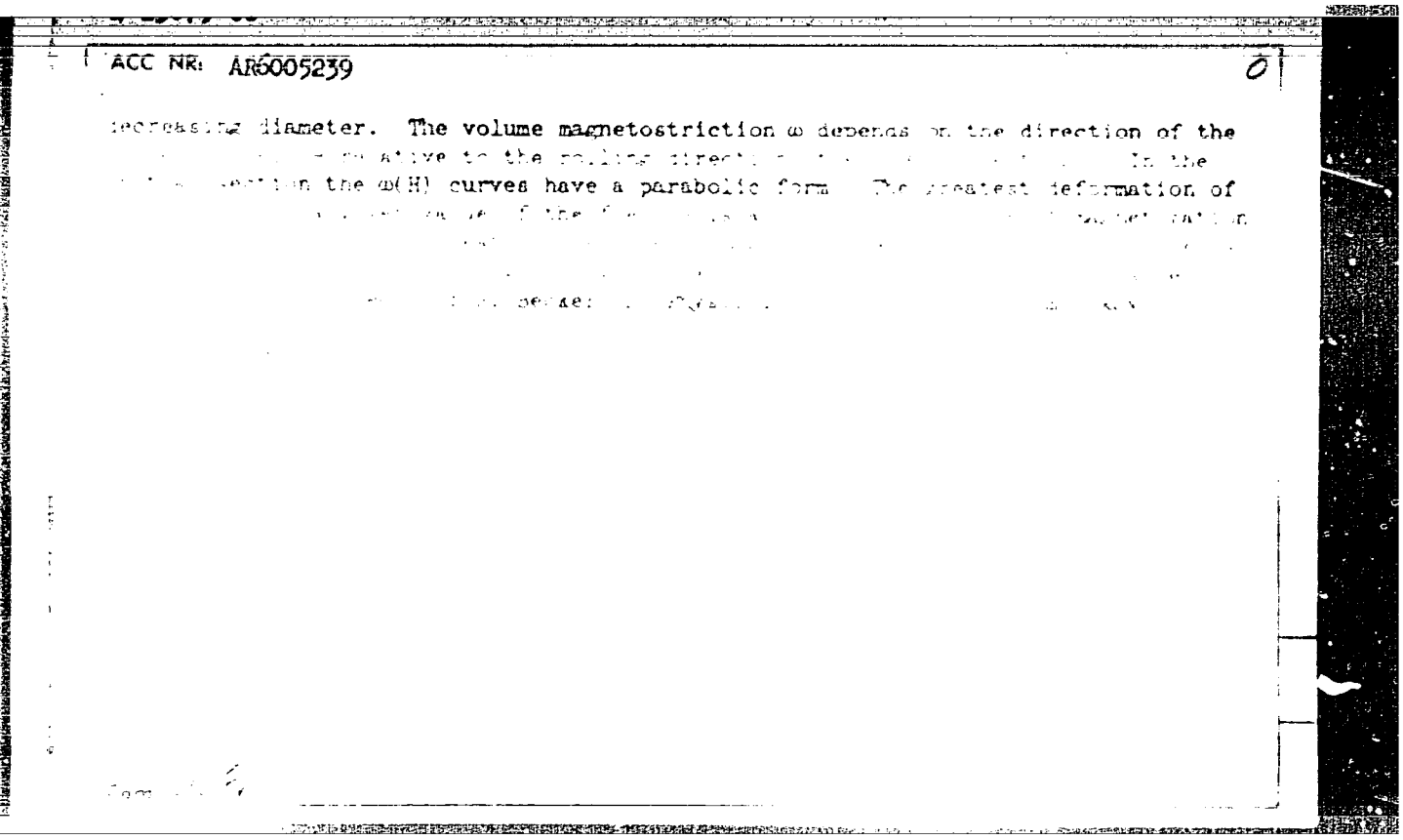
...striction, steel, materia[illegible]

[illegible] the aid of the method of [illegible]

[illegible] transverse ma[illegible]

2

Card 1/2



ACC NR: AR5005239

decreasing diameter. The volume magnetostriction ω depends on the direction of the
[illegible] relative to the rolling direct[illegible] In the
[illegible] section the ω(H) curves have a parabolic form. The greatest deformation of
[illegible]

DUNAYEVA, G.V.

History of the formation of the Uvek and Knyazevka sliding hillsides in the Volga Valley. Trudy Lab. gidrogeol.probl. 14:113-127 '57. (MIRA 11:5)
(Volga Valley--Landslides)

ROGOZIN, Igor' Stepanovich; DUNAYEVA, Galina Vladimirovna; POPOV, I.V., prof., doktor geol.-min. nauk, otv. red.; FILIPPOVA, B.S., red. izd-va; ASTAF'YEVA, G.A., tekhn. red.

[Landslides of the Saratov region of the Volga Valley] Opolzni Saratovskogo Povolzh'ia. Moskva, Izd-vo Akad. nauk SSSR, 1962. 161 p. (MIRA 15:7)
(Volga Valley--Landslides)

OSIPYAN, V.T.; KAZHDAN, V.B.; DUNAYEVA, I.D.

Butadione, an effective agent for the control of body lice. Zhur. mikrobiol. epid. i immun. 31 no.7:18-22 Jl '60. (MIRA 13:9)

1. Iz Voyenno-meditsinskoy ordena Lenina akademii im.Kirova.
(PYRAZOLIDINEDIONE) (LICE)

OSIPYAN, V. T.; GRABOVSKIY, B. S.; KAZHDAN, V. B.; DUNAYEVA, I. D.

Method of laboratory selection of repellent preparations and evaluation of their activity in relation to fleas. Med. paras. i paras. bol. no.6:734-737 '61. (MIRA 15:6)

1. Iz Voyenno-meditsinskoy ordena Lenina akademii imeni S. M. Kirova.

(INSECT BAITS AND REPELLENTS) (FLEAS)

OSIPYAN, V.T.; STEPANOV, M.K.; GRABOVSKIY, B.S.; SMIRNOV, K.K.; KAZHDAN, V.B.; MASLIY, L.K.; DUNAYEVA, I.D.

Comparative effectiveness of hexamethylenebenzamide and acetyltetrahydroquinoline as protective agents against fleas in humans. Med. paraz. i paraz. bol. 32 no.5:551-553 S-O'63 (MIRA 16:12)

1. Iz Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

DUNAYEVA, I.D.

Residual action in chlorophos in the substrate on the preimaginal phase of house flies. Med. paraz. i paraz. bol. 33 no.1: 13-15 Ja F '64 (MIRA 18:1)

1. Voyenno-meditsinskaya ordena Lenina akademiya imeni S.M. Kirova .

DUNAYEVA, L.A.

Malignant degeneration of benign tumors of the bones and fibrous osteodystrophy following X-ray therapy. Med. rad. 10 no.5:90-95 My '65. (MIRA 18:6)

1. Respublikanskiy onkologicheskiy dispanser Uzbekskoy SSR (glavnyy vrach Z.R. Bakhimov), Tashkent.

PENYUGALOVA, Z.P.; PUSHKAREVA, Z.V.; DUNAYEVA, L.V.; DARIYENKO, Ye.P.

Certain reactions of 2,3-diaminophenazine. Zhur.org.khim. 1 no.2:358-362 F '65. (MIRA 18:4)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova.

DUNAYEVA, K.M.; IPPOLITOVA, Ye.A.

Formation of uranium oxysulfide of the composition $2US_2 \cdot UO_2$. Vest. Mosk. un. Ser. 2: Khim. 16 no.1:54-56 Ja-F '61. (MIRA 14:4)

1. Kafedra neorganicheskoy khimii Moskovskogo universiteta.
(Uranium oxysulfide)

S/189/61/000/006/005/005
D228/D304

AUTHORS: Dunayeva, K.M., Ippolitova, Ye.A. and Khrustaleva, G.D.

TITLE: Investigating the thermal stability of uranyl sulfate

PERIODICAL: Moscow. Universitet. Vestnik. Seriya II, khimiya, no. 6, 1961, 35-37

TEXT: In studying the thermal decomposition of uranyl sulfate the authors were primarily interested in ascertaining the temperature of dissociation of the anhydrous salt. The trihydrate was prepared by dissolving U_3O_8 in a solution of H_2SO_4 at 80° and evaporating the filtrate, when crystals containing 56.95% U and 8.04% S were obtained. On heating the $UO_2SO_4 \cdot 3H_2O$ the following changes were observed: the loss of 1 1/2 molecules

Card 1/2

Investigating the thermal ...

of water at 20-115°, after which the hydrate is stable to 150°; complete dehydration at 300°, after which the anhydrate is stable to 720°; and the decomposition of the sulfate into U_3O_8 and SO_2 above 720°. Examination of the heating curve of uranyl sulfate, recorded by a Kurnakov pyrometer, shows that the endothermic effects at 125° and 300° respectively correspond to the loss of 1 1/2 molecules of water and the salt's full dehydration. There are 2 figures, 1 table and 2 non-Soviet-bloc references.

ASSOCIATION: Kafedra neorganicheskoy khimii (Department of Inorganic Chemistry)

SUBMITTED: May 20, 1960

Card 2/2

DUNAYEVA, L.A.

Clinical aspects and roentgenotherapy of osseous form of xanthomatosis (Hand-Schueller-Christian diseases) Vest. rent. i rad. no.6:81-83 N-D '54. (MLRA 8:1)

1. Iz Uzbekskogo respublikanskogo onkologicheskogo dispansera (glavnyy vrach Z.R.Rakhimov, zav. rentgenologicheskim otdeleniyem L.A.Dunayeva)

(LIPOIDOSIS,
Hand-Schueller-Christian synd., clinical aspects & x-ray ther.)
(RADIOTHERAPY, in various diseases,
Hand-Schueller-Christian synd.)

DUNAYEVA, L.A.

USSR/ General Problems of Pathology. Tumors.

Abs Jour: Referat. Zh.-Biol., No 2, 1958, 7769

Author: Novikov, N.A., Dunayeva, L.A., Rakhimov, L.A.

Inst:

Title: The Carcinoma of the Larynx

Orig. Pub: Za Sots. Zdravookhr. Uzbekistana, 1955, No. 6, 43-47

Abstract: The most dangerous are carcinomas of the epiglottis, false chords and of the laryngeal ventricle. The true vocal chords are poor in lymphatics; therefore, metastases appear later and develop more slowly. The false vocal chords are rich in lymphatics and metastatic spread therefrom occurs early. Prognosis depends upon the location of the tumor; it is different for cancer of the true vocal chords, the portion below the vocal chords, and the vestibule of the larynx. Of 100

Card : 1/2

DUMAYEVA, L.A., assistent

Clinical aspects of neuroblastoma and the X-ray diagnosis of metastases into the bones. Med.zhur.Uzb. no.12:38-46 D '58. (MIRA 13:7)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (zav. - prof. D.M. Abdurasulov) Tashkentskogo gosudarstvennogo instituta usovershenstvovaniya vrachey i Respublikanskogo onkologicheskogo dispansera (glavnyy vrach - Z.R. Rakhimov).

(NERVOUS SYSTEM--CANCER) (BONES--DISEASES)

DUNAYEVA, L.A.

X-ray treatment of bone sarcomas. Med.rad. no.10:23-27 '61.
(MIRA 14:10)

1. Iz kafedry rentgenologii i meditsinskoy radiologii Tashkentskogo instituta usovershenstvovaniya vrachey i Respublikanskogo onkologicheskogo dispansera.
(BONES—CANCER) (X RAYS—THERAPEUTIC USE)

DUMAYEVA, N.

Efficiency promoters of a young plant. Metallurg 8 no.7:35-36 Jl '63. (MIRA 16:8)

1. Nachal'nik Byuro po delam ratsionalizatsii i izobretatel'stva Cherepovetskogo metallurgicheskogo zavoda.
(Iron and steel plants—Equipment and supplies)

DUNAYEVA, N.I.; MILEVSKIY, B.F.

People of a creative mind. Metallurg 10 no.8:3-4 Ag '65. (MTRA 18:8)

1. Nachal'nik Byuro po ratsionalizatsii i izobretatel'stvu Cherepoveteskogo metallurgicheskogo zavoda (for Dunayeva).
2. Predsedatel' Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Milevskiy).

DUNAYEVA, N.M. [Dunaieva, N.M.]

Gypsum and anhydrite. [Pratsi] Inst. geol. nauk AN URSR. Ser. geol. rod. kor. kop. no.1:59-66 '63.

Sandstone. Ibid.:66-71

(MIRA 18:6)

DUNAYEVA, N. N.

DUNAYEVA, N. N. --"Upper Coal Pearlweeds of the Donets Basin and their Stratigraphic Significance." *(Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Min of Higher Education, Ukraine SSR, Kiev Order of Lenin Polytechnic Inst, Kiev, 1955

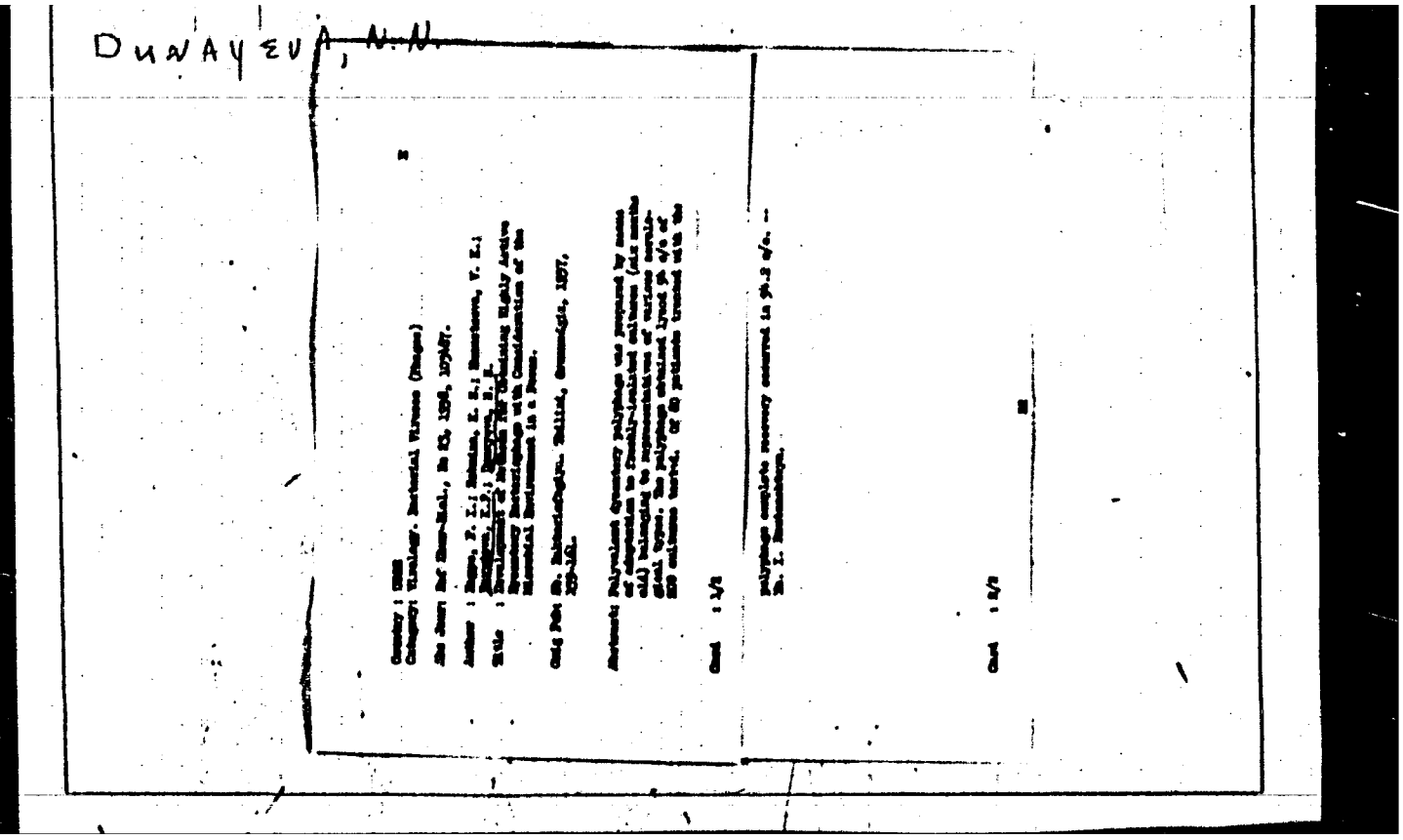
SO: Knizhnaya Letopis', No. 25, 18 Jun 55

* For Degree of Candidate in Geological and Mineralogical Sciences

DUNAYEVA, N.N.

On the existence of the genus Rhomboporella Bassler. Dokl. AN SSSR 110 no.4:668-669 O '56. (MIRA 10:1)

1. Predstavleno akademikom S.I. Mironovym.
(Trepostomata)



DUNAYEV, N.N.

BYKOV, Ol'gerd Leonardovich; DUMANSKAYA, N.N., red.; OKOPNAYA, Ye.D., tekhn.red.

[Fundamentals of the geology of the U.S.S.R.] Osnovy geologii SSSR. Kiev, Izd-vo Kievskogo univ. Pt.1. 1960. 335 p. (MIRA 14:4)

(Geology)

DUNAYEVA, N.N.

New polyzoans of the genus Rhombotrypella from the upper Carboniferous of the Donets Basin. Paleont.shur. no.2: 44-51 '60. (MIRA 13:7)

1. Institut geologicheskikh nauk AN USSR.
(Donets Basin--Polyzoa, Fossil)

DUNAYEVA, Nataliya Nikolayevna [Dunaieva, N.M.]; AYZENBERG, D.Ye., doktor geol.-mineral.nauk, otv.red.; CHEKHOVICH, N.Ya., red.; LIBERMAN, T.R., tekhn.red.

[Upper Carboniferous moss animals of the western Donets Basin] Verkhn'okam'ianovuhil'ni mokhovatky zakhidnoi chastyny Donbasu. Kyiv, Vyd-vo Akad.nauk Ukrains'koi RSR, 1961. 120 p. (Akademiia nauk URSR, Kiev. Instytut geologichnykh nauk. Trudy, no.38). (MIRA 14:12)

(Donets Basin--Polyzoa, Fossil)

ZHUKOV, M.M.; SLAVIN, V.I.; DUNAYEVA, N.N.; KHAIN, V.Ye., red.;
SHANTSER, Ye.V., red.; KOLOSHINA, T.V., red. izd-va;
BYKOVA, V.V., tekhn. red.

[Principles of geology] Osnovy geologii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr. 1961. 625 p.
(MIRA 15:2)

(Geology)

DUNAYEVA, N.N.

New Bryozoa species Nipponostenopora from the Lower Carboniferous in Voronezh Province. Paleont. zhur. no.4:124-126 '63. (MIRA 17:1)

1. Institut geologicheskikh nauk AN UkrSSR.

DUNAYEVA, N.N.

New polyzoans of the order Trepostomata from the Lower Carboniferous of the Donets Basin. Paleont. zhur. no.2:39-44 '64. (MIRA 17:7)

DUNAYEVA, N.N.

Fauna of Lower Carboniferous Trepostomata in the Donets Basin. Trudy Inst. geol. nauk AN URSR Ser. strat. i paleont. no.48: 104-143 '64 (MIRA 18:1)

DUMAYEVA, P.F., spetsred.; VASIL'YEVA, G.N., red.; YAROV, E.M., tekhn.red.

[Meat industry] Miasnaia promyshlennost'. Moskva, Pishchepromizdat. No. 23. 1957. 18 p. (MIRA 11:12)

1. Russia(1923- U.S.S.R.) Ministerstvo promyshlennosti. Otdel tekhnicheskoy informatsii.
(Meat industry)

PERMYAKOV, V.G.; DUNAYEVA, S.A.

Diffusive redistribution of aluminum during the graphitizing annealing of cast iron. Lit. proizv. no.2:36-37 F '65.
(MIRA 18:6)

GUTERMAN, I.G.; DUNAYEVA, S.I.; MAMAYEVA, L.V.

Applicability of the method of differences in aeroclimatological study of the wind. Trudy TSNIGMA no.2:46-69 '55. (MLRA 9:7)
(Winds)

DUNAYEVA, S.I.

Mean wind field over the Northern Hemisphere in January and July. Trudy NIIAK no.14:35-48 '61. (MIRA 15:1)

1. Nauchno-issledovatel'skiy institut aeroklimatologii.
(Winds)

GUTERMAN, I.G.; DUNAYEVA, S.I.

Some remarks on the construction of aeroclimatic wind charts.
Trudy NIIAK no.16:45-49 '62. (MIRA 15:11)
(Winds)

ACCESSION NR: AT4028301 S/2667/63/000/024/0066/0091

AUTHOR: Guterman, I. G.; Dunayeva, S. I.; Zvereva, Ye. P.; Marchenko, A. S.

TITLE: Climatic characteristics of the wind in a model of the standard atmosphere

SOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy*, no. 24, 1963, 66-91

TOPIC TAGS: standard atmosphere, meteorology, climatology, wind, wind velocity, wind direction, troposphere, stratosphere

ABSTRACT: A method has been developed for processing aerological observations for a 10-year period (1950-1959) to the 30-mb isobaric surface for the determination of wind characteristics, averaged over large regions and the hemisphere. The determined characteristics are recommended as the first variant of a model of a standard atmosphere for the northern hemisphere. Wind parameters were determined for January, for July and for the year to a height of 25 km. The principal parameters used for this model were the mean scalar velocity of the wind for the month and the year and the resultant wind vector (value and direction). Both characteristics were determined using data for 200 stations, a total of 470,000 observations, processed by electronic computer. Principles and methods employed in this study are described fully. The many difficulties in handling this complex problem

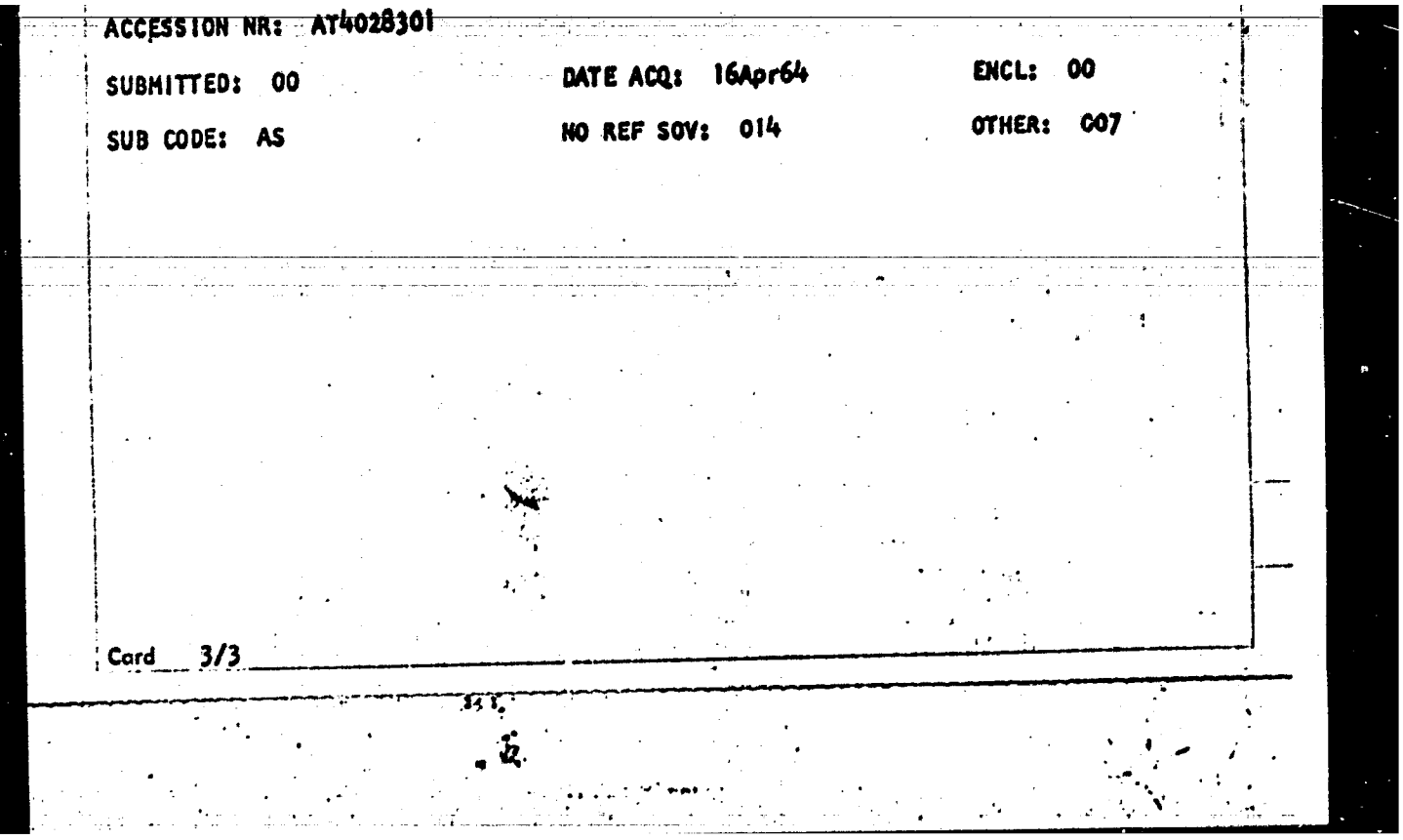
Card 1/3

ACCESSION NR: AT4028301

are discussed. Wind parameters are summarized and analyzed for six geographic regions within which the character of wind distribution can be considered homogeneous in the first approximation. Nonuniformity of station distribution and decreasing number of observations at greater heights are taken into account. In this process data were averaged for 206 equal-area squares in the northern hemisphere. The six regions for which data are generalized are: polar regions; Europe and part of Asia; North America and the North Atlantic; North Africa and Central Asia; North Pacific Ocean and the Far East; and the equatorial and tropical regions. The following section headings indicate the nature of the development of the paper: Introduction; characteristics of the data used; principal geographic regions defined for the purpose of description of wind over the northern hemisphere; the wind vector as a random value; determination of the climatic characteristics of the wind; general principles for determining mean parameters for regions and the hemisphere; averaging data for stations; averaging data for regions and the hemisphere; determination of wind characteristics for standard heights; practical computation of derivatives of wind parameters at standard heights. Orig. art. has: 29 formulas, 11 figures and 3 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut aeroklimatologii, Moscow (Scientific Research Institute of Aeroclimatology)

Card 2/3



ACCESSION NR: AT4028301

SUBMITTED: 00	DATE ACQ: 16Apr64	ENCL: 00
SUB CODE: AS	NO REF SOV: 014	OTHER: 007

Card 3/3

24.7400

78105
SOV/70-5-1-14/30

AUTHORS: Boyarskaya, Yu. S., Keloglu, Yu. P., Bologa, M. K., Dunayeva, S. M.

TITLE: Study of the Effects of Some Factors on the Hardness of KCl and NaCl Single Crystals

PERIODICAL: Kristallografiya, 1960, Vol 5, Nr 1, pp 98-104 (USSR)

ABSTRACT: Numerous experiments by various authors are cited. Some of them produced contradictory results and made further studies necessary. The (100) faces of two sets of KCl crystals were etched for different periods with water and tested for the indentation and scratching hardnesses. Both values at first increased with duration of etching for 2-3 min but dropped again to usual values on still further etching. Polishing of (100) faces in saturated KCl solution on a cloth also increased the hardness with time duration for the first 2 min and reduced again on still further duration. However, no hardness increase was evident when specimens were polished with iron oxide instead of KCl

Card 1/3

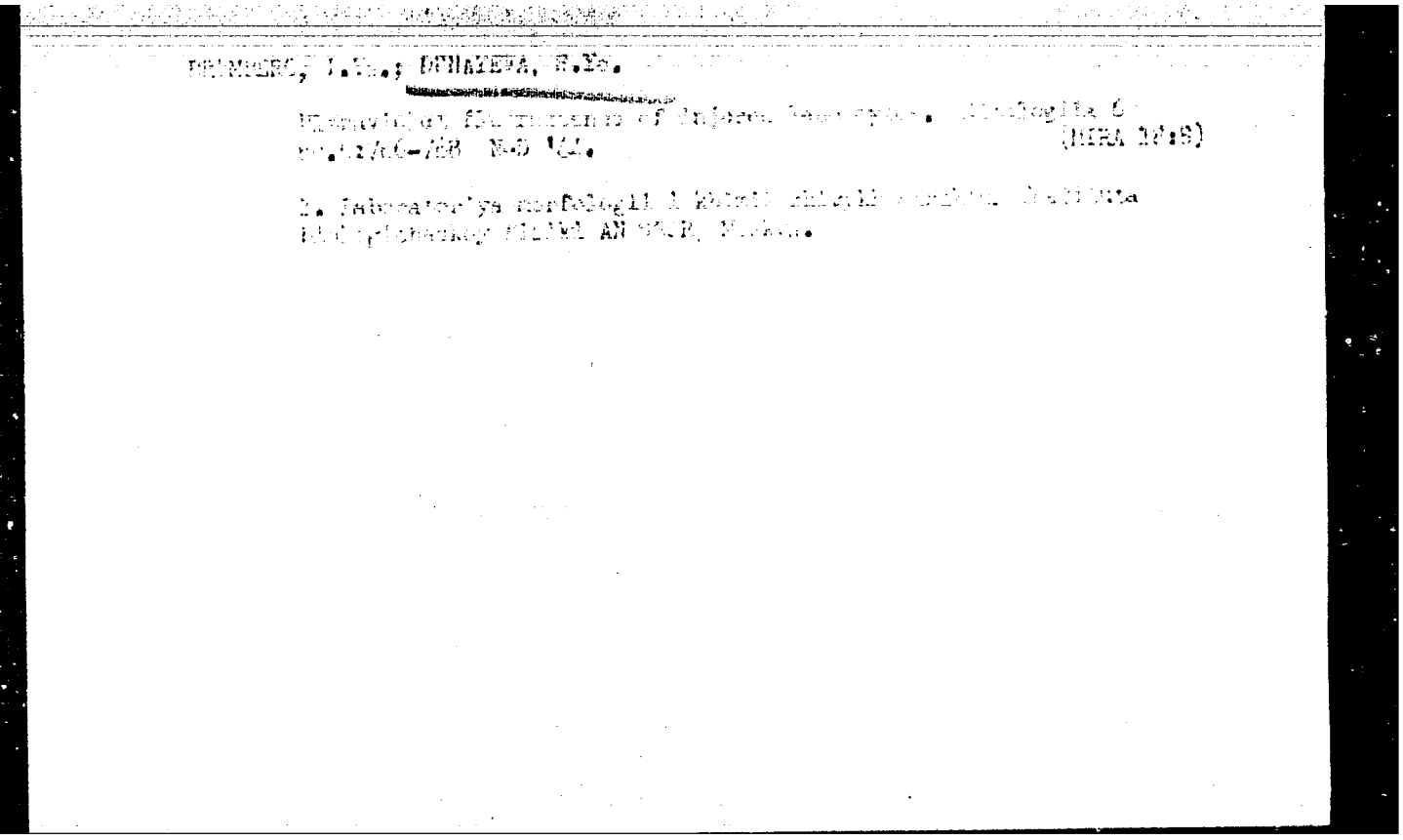
solution. Thus, impregnation of the surface layer with water is believed to be the principal reason for the hardness increase. The reason for its drop with further treatment may be related to the healing of dislocations because of the intermediary action of the impregnating water. The healing as such increases and stabilizes the surface hardness but at the same time eliminates the internal stresses around former dislocations and, consequently, the additional hardness caused by these stresses. To check this concept the authors tested NaCl crystals which a priori had different degrees of structure distortions and obviously required different periods for the healing of their defects. The structure distortions, produced by a repeated alternation of coloring and bleaching procedures, proved to alter the surface hardness of crystals to such a small extent that the hardness changes during the experiments remained within the limits of possible errors. However, longer periods of

 etching to achieve the maximum surface hardness of more

intensively distorted crystals were obvious. M. V. Klassen-Neklyudova and V. L. Indenbom are acknowledged for advice. There are 6 figures; 4 tables; and 10 references, 8 Soviet, 1 German, and 1 Russian translation of a U.K. paper (by A. H. Cottrell).

ASSOCIATION: Kishinev State University (Kishinevskiy gosudarstvennyy universitet)

SUBMITTED: July 16, 1959



DUNAGEVA, T. N.

"Ecology of the Small Rodents of the Tundra and Their Significance in Regulating the Number of Polar Foxes," Sub. 20 May 47, Moscow Fur and Pelt Inst.

Dissertations presented for degrees in science and engineering in Moscow in 1947.

SO: Sum.No.457, 18 Apr 55

LUNAYEVA, T. N.

42210. KUCHERUK, V. V., LUNAYEVA, T. N. - Materialy po dinamike chislennosti polevki Brandta, K voprosu o vozdeyativii epizootii na populytsiyu. Materialy K poznaniyu fauny i flory SSSR, izd. Mosk. ovom ispytateley prirody, Novaya seriya. Otd. zool., VYP. 3, 1948, c 111-78 -Bibliogri 57 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948

DUNAYEVA, T. N.

USSR/Medicine - Tularemia Sep/Oct 50
Muskrats, Diseases

"Susceptibility of Muskrats (Ondatra zibetnica L.) to Infection by Tularemia," T. N. Dunayeva, O. S. Yemel'yanova, Lab of Tularemia, Div of Med Parasitol, Inst of Exptl Med imeni Acad Ye. N. Pavlovskiy, Acad Med Sci USSR

"Zool Zhur" Vol XXIX, No 5, pp 459-465

Finds muskrats quite susceptible to subcutaneous infection, MLD being 1 - 10 standard units of Cen State Sci Control Inst of Bacteriol Prepn. Finds them somewhat more resistant to alimentary infection,

171T75

USSR/Medicine - Tularemia (Contd) Sep/Oct 50

10,000 - 10,000,000 units being required in this case. They are not infected by water with 1,000 units per cu cm. Transmission can be affected by contact and occurs orally. Chief of Lab, Prof N. G. Olsuf'yev; Head of Div, Acad Ye. N. Pavlovskiy; Dir of Inst, Prof V. D. Timakov, Corr Mem, Acad Med Sci USSR.

171T75

DUNAYEVA, T.N and OLSUF'YEV, N.G.

"The Susceptibility to Tularemia and the Possible Epidemical Significance of the Weasel, Polecat, and Fox," Zool. Zhur. 30, No. 1, pp. 78-83. 1951

OLSUF'YEV, N.; DUNAYEVA, T.

On the sensitivity of the weasel, skunk and fox to tularemia and their possible epidemiologic significance. Zool.zhurnal 30 no.1: 78-83 1951. (CIML 20:5)

1. Tularemia Laboratory of the Department of Parasitology and Medical Zoology (Head--Academician Ye.N.Pavlovskiy) of the Institute of Experimental Medicine imeni N.F.Gamaleya (Director--Prof.V.D. Timakov, Corresponding Member of the Academy of Medical Sciences of the Academy of Medical Sciences USSR.

DUNAYEVA, T. N.

KUCHERUK, V.V.; RYUTIN, V.A. [deceased]; DUNAYEVA, T.N.

Studying the epizooty of pasteurellosis in tarbagans of eastern Mongolia. Mat. k posn. fauny i flory SSSR. Otd. zool. no.22:82-97 '51. (MIRA 11:3)

(Mongolia--Marmots--Diseases and pests)
(Hemorrhagic septicemia)

DUNAYEVA, T.N.

OLSUF'YEV, N.G. and DUNAYEVA, T.N.

General and Regional Problems in Experimental Parasitology and Medical Zoology (Vol. VII)

"The Susceptibility to Tularemia of the Common Field Mouse With Various Methods of Infection," [redacted]. 1951,

DUNAYEVA, T. N.

USSR/Medicine - Epidemiology, Carriers May/Jun 52
of Infectious Diseases

"Susceptibility and Infection Sensitivity to Tularemia of Some Species of Field Mice (Sub family Microtinae)" T. N. Dunayeva, N. G. Olsuf'yev, Lab of Tularemia, Div of Parasitol and Med Zool, Inst of Epidemiol and Microbiol imeni N. F. Gamaleya, Acad Med Sci USSR

"Zool Zhur" Vol XXXI, No 3, pp 457-466

Microtus arvalis, M. socialis, M. agrestis, M. michnoi, Lagurus lagurus, Arvicola terrestris, and Clethrionomys glareolus exhibited a high deg of susceptibility and high infection sensitivity to virulent 223T39 strains of B. tularense introduced either subcutaneously or intracutaneously. In the majority of cases, a lethal infection was caused by a dose corresponding to 1 bacterial body. Of the greatest importance from the epizootological standpoint among these rodents are Microtus arvalis and Arvicola terrestris, of less importance Lagurus lagurus and M. socialis. 16 references

On tularemia are appended, among them "Susceptibility of M. michnoi to Experimental Infection With Tularemia," N. D. Altareva, Ye. A. Mitina, "Is Irkutsk Protivochumnogo Inst" (News of the Irkutsk Antiplague Inst), Vol VI, 1946; "Secretion of B. tularense by Field Mice Having Tularemia in a Nonacute Form," N.P. Sveshnikova, "Zhur Mikrobiol, Epidemiol, i Immunol" No 6, 1950. 223T39

DUNAYEVA, T.N.

"Experimental Research on Tularemia with Wild Animals (Rodents, Predatory and Insectivorous) As the Basis of Study of The Innateness of This Infection," 1954. Zool. Zhur., 33, No. 2, Lab. Tularemia, Section Parasitol and Med-Zool, VIEM im. Gamaleya, AMS USSR.

GESUF'YEV, N.G., KUCHERUK, V.V., DUNAYEVA, T.N. and RUBINA, M.A.

"Experimental Study of Winter Epizotic Tularemia Among Ordinary Field Mice in Stacks of Straw," (1955).

Section of Parasitology & Med. Zool., Inst. Epidemiol. & Microbiol. im. N.F. Gamaleya, AMS USSR and Inter-District Anti-Tularemia Station.